

REMARKS

Applicant's counsel thanks the Examiner for the careful consideration given the application.

Claims 3, 6, 13, and 16 have been amended to resolve the Section 112 concerns expressed by the Examiner. Product claims 17, 19, 20 and 21 have all been modified to make them "product-by-process" claims. "Product-by-process" claims are specifically allowed by the MPEP; see MPEP 2173.05(p), which states: "A product-by-process claim, which is a product claim that defines the claimed product in terms of the process by which it is made, is proper." No new matter has been added.

35 USC §102

Claims 1-5, 8-12, 14, 15 and 18 have been rejected as being anticipated by German patent document DE 2843264.

DE 2843264, hereinafter referred to as '264, shows "a method for producing textile items with "tricot-Raschel-crochet" linear looms for warp knitting, having at least a first bed (8) of needles (4), comprising the step of manufacturing at least a textile item". It does not show the "step of moving at least the first needle bed (8) during the step of manufacturing a textile item".

We now refer to the following documents:

- Attachment A (A1) page 16 of "Fundamentals of weft knitted fabrics" by George A Tay (Fashion Institute of Technology, New York) published on May 1996;
- Attachment B (A2) page 178 of "Knitting Times Yearbook 1976";
- Attachment C (A3) page UNI 21-2a "Verfahren der Web und Maschenwarenherstellung" by Dr.Ing.G. Broeckel.

As clearly defined in documents A1 and A2, herewith enclosed as Attachments A and B respectively, a “needle bed” is “a housing for the needles” and, in particular, “a flat slotted plate with grooves or slots cut into it” in which slots “the knitting needles operate”. A “needle bed” is therefore a clear and standard term well recognized in the knitting art. Hence, in the prior art needle beds of warp knitting machines are fixed elements which always remain motionless during the knitting process and the needles move in respective slots in the needle beds.

On the contrary, what is usually called “needle bar” is a completely different element that is represented by the bar on which the needles are mounted in order to be moved up and down, with respect to the needle bed, during the knitting process.

Consequently, it is clear that in '264 the needle bed is represented by the fixed element marked with number 8 and not by the movable element marked with number 3.

This is confirmed by document A3 (Attachment C). In fact, by comparing the picture on the right part of page 3 of Attachment C with figure 3 of '264, we can unambiguously infer that element 8 of '264 corresponds to the needle bed (*Nadelbett* in German) while element 3 of '264 corresponds to the needle bar (*Zungennadelbarre* in German).

From the specification and the figures of '264 it is clear that '264 shows the movement of the needle bar (3) (that is a usual and standard feature of warp knitting machines) but not a movement of the needle bed which remains always motionless during the production. In fact, on page 2 lines 7-11 we can read that the needle bars are mounted on levers which allow them to move to different heights to move the needle mounted on them but nowhere in '264 is it stated that the needle bed (8) can be moved.

Seeing that the invention is related to the movement of the needle bed, that in the prior art is always motionless during production, the subject matter of claim 1 is felt to clearly define over the prior art. For the same reasons, claims 8 and 18 also define over the prior art. Their dependent claims are thus also allowable as depending from an allowable base claim.

Claims 17 and 19-21 have been revised to make them “product-by-process” claims incorporating the process of method claim 1. Since claim 1 is new and inventive, it is believed that claims 17 and 19-21 are also new and inventive.

Since all of the concerns of the Examiner have now been resolved, reconsideration and allowance of the application is respectfully requested.

If any additional fees are required by this communication, please charge such fees to our Deposit Account No. 16-0820, Order No. BUG4-40378.

Respectfully submitted,
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ATTACHMENT A (1/2)

FUNDAMENTALS OF WEFT KNITTED FABRICS

by

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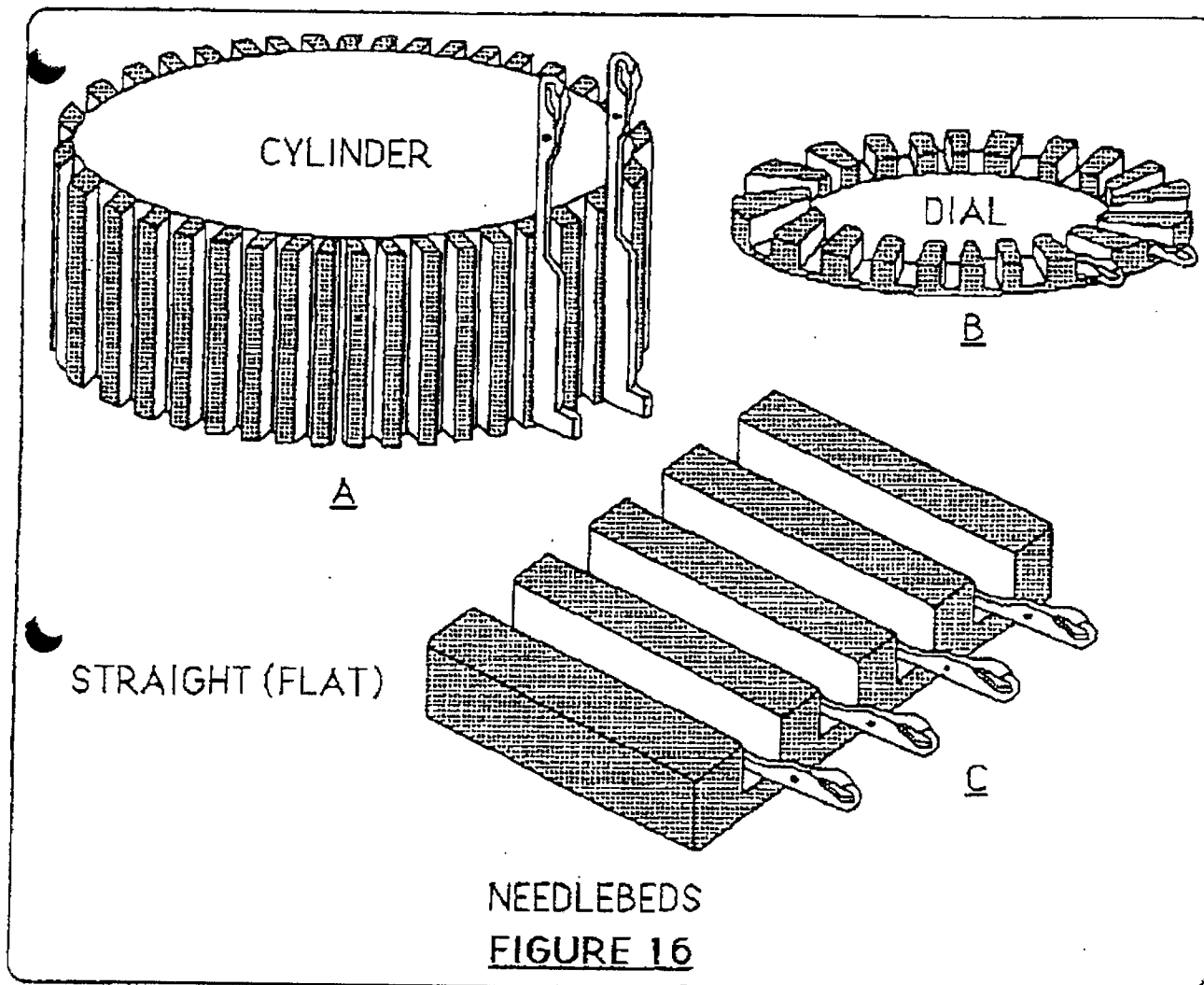
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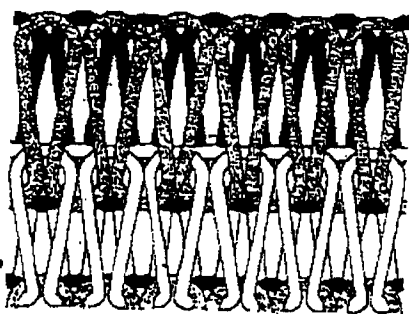
CHAPTER III MACHINE NOMENCLATURE

Needlebeds are housings for the needles. They are simply pieces of metal into which slots have been cut. The needles are housed in the slots. A cylinder is a circular needlebed in which the needles are housed vertically (Figure 16-A). A dial is a circular needlebed in which the needles are housed horizontally (Figure 16-B). Knitting machines which utilize cylinder and/or dials are referred to as circular knitting machines. This is a very broad term and simply signifies that the needlebed(s) are circular. A straight needlebed is a rectangular piece of metal into which slots have been cut (Figure 16-C). Knitting machines which utilize straight needlebeds are referred to as flat machines. Again, this is a very broad term and simply signifies that the needlebed(s) are straight.



struction of the Milanese fabric made on a circular machine is shown on the preceding page. The stitches are composed of two loops, one from each set of warp threads, and it can be seen how they move diagonally from one stitch to another at each course.

MILANO RIB—A three-course structure comprising one course of 1 X 1 rib knitted on cylinder and dial, one course knitted on dial needles only and one course knitted on cylinder needles only.



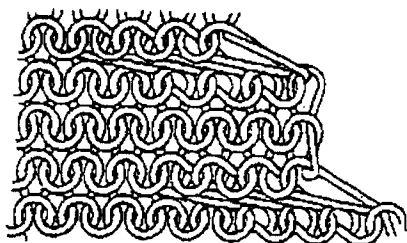
MILANO RIB, MODIFIED—A four-feed repeat structure similar to above except two interlock courses replace the single rib course in the knitting cycle.

MONOPANTY—Designation for one-piece seamless pantyhose produced on a Lonati fine gauge seamless pantyhose machine of the same name. Toe can be open or closed, using Rosette method. Leg segment may be either micromesh, diagonal or 1 X 1.

NARROW AND BROAD RIBS—Rib fabric structures marked by distinctive vertical ribs. This category ranges from such narrow rib formations as 1 X 1 and 2 X 2 to such broader, but not necessarily limited, rib combinations as 6 X 3.

NARROWING—The operation in full-fashioned knitting in which loops are transferred inward from the selvage to shape the fabric.

In the jersey fabric structure below, shaping is by narrowing. In each of the two narrowing (fashioning) courses bordering the three knitting courses, four loops are moved inward from the selvedge toward the center two wales at a time.

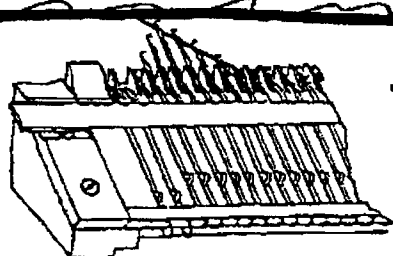


NARROWING POINT—A pointed metal device used to transfer loops to

adjacent needles in the narrowing operation.

NARROWING, V-BED—V-bed narrowing is not as widely practiced on V-bed latch needle machines as widening. The principal machine for narrowing on a V-bed basis is the Stoll Model 220 machine. On this machine, the narrowing action is controlled from a narrowing box through L-shaped narrowing points. These points work with grooved stem latch needles.

NEEDLEBED—A needlebed is a flat slotted plate with grooves or slots cut into it. It is in these slots that the knitting needles operate. The number of needle slots to the inch determines the cut (or gauge) of the machine. A needlebed having six needle slots to the inch is referred to as a six cut machine.



NEEDLE LEAD—A group of latch needles cast in lead and employed in Raschel knitting. On German model Raschel machines, the leads measure approximately 1 7/8 inches and on American model Raschel machines the lead measures 2 inches.

NEEDLE LOOP—A loop in knitted fabric which has been drawn through a previous loop, as below:

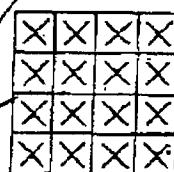


NEEDLE PROTECTOR—An electrical device designed to prevent needle breakage caused by lumps or slubs or bunching of yarn at the needle.

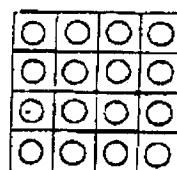
NEEDLE SLOT—Grooves cut into cylinders and dials on circular knitting machines or needlebeds on flat-bed machines to house knitting needles. See Trick.

NOTATION—In analyzing knitted fabric short-hand notational systems are employed to express on design (graph) paper the stitch structure incorporated in the fabric. Various detailed systems have been proposed but the most common method is use of the following symbols: The purl stitch is denoted by [o]; the jersey stitch by [x]; a float by an empty square space []; and a tuck by a

dot in a square space [·]. Thus, by use of these symbols a complete fabric structure can be depicted. Shown below at left is the notation for the face side of jersey fabric and at right the reverse side:

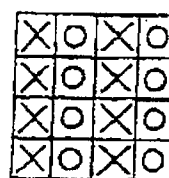


JERSEY FACE NOTATION

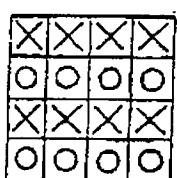


JERSEY REVERSE NOTATION

Drawn below at left is the notation for a 1 X 1 rib stitch and at right the notation for purl stitch:

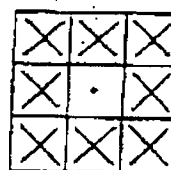


1 X 1 RIB STITCH NOTATION

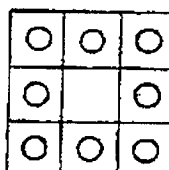


PURL STITCH NOTATION

Notation for a tuck stitch and for the float stitch is illustrated below.



TUCK STITCH NOTATION



FLOAT STITCH NOTATION

OTTOMAN RIB—A double knit fabric structure which consists of straight rolls or swellings extending course-wise. The rolls are produced, as in a roll welt, by knitting more stitches per unit length of fabric on one side than on the other side.

OVERLAP—Lateral movement of the guide bar in lapping yarn on the beard side of the needle.

PANTYHOSE—A fully seamless or cut-and-sewn garment comprising, in one piece, stockings and a continuous-knitted panty segment. A cut-and-sewn pantyhose is invariably created from two extra-length stocking blanks slit and joined together by a U-seam or sewn-in gusset. Its elastic waistband may be knitted-in or subsequently attached by seaming.

PANTYHOSE, FORM-FIT—Pantyhose designated as either form-fit or contour control incorporate spandex elastomeric yarn in the panty portion in addition to stretch nylon. The presence of the spandex provides compression and acts as the suspension means in place of an elastic waistband. Because of the gentle constricting action of the elasto-

ATTACHMENT C (1/3)

Verfahren der Web- und Maschenwarenherstellung

1. Teil Webverfahren

Zusammenfassung von Vorlesungen
an der Universität Stuttgart

ATTACHMENT C (2/3)

Verfahren der Web- und Maschenwarenherstellung

2. Teil Verfahren zur Maschen- warenherstellung

Zusammenfassung von Vorlesungen
an der Universität Stuttgart

ATTACHMENT C (3/3)

21.2 Elemente zur Maschenbildung (Wirken)

Ausser den bereits beschriebenen Nadeln sind bei den Wirkmaschinen noch folgende nadelabhängigen Wirkelemente zur Maschenbildung erforderlich:

Kullierplatinen

Zum Legen des Fadens in Schleifenform

Einschliessplatinen

Zum Halten und Führen der Fäden und Maschenschleifen.

Pressen

Zum Schliessen der Spitzennadeln (Eindrücken der Nadelspitze in die Tasche) und bei Rundwirkmaschinen zur Musterrung (Pressmuster), ausgebildet als Profilschiene bei Kettenwirkmaschinen und als Pressrad bei Rundwirkmaschinen.

Abschlagplatinen

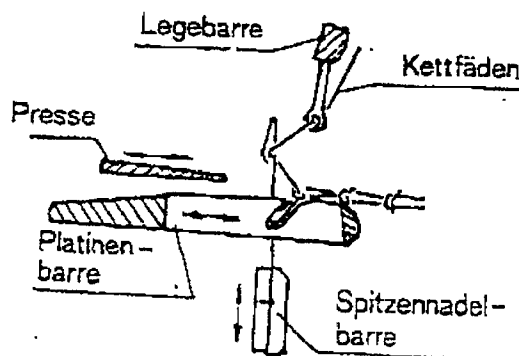
Zum Halten und zum Vorschieben der Maschen über die Nadelköpfe.

Warenabzug

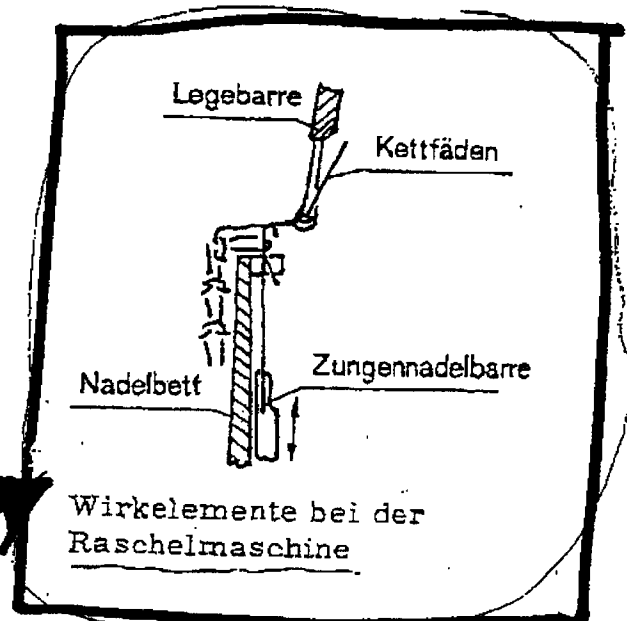
und bei Kettenwirkmaschinen:

Lochnadeln, Legeröhrchen, Fadenführer

zur Führung der Fäden.



Wirkelemente beim Kettenwirkautomaten



Wirkelemente bei der Raschelmaschine

Zungenanschläge

Elemente zur Verbindung des Hochschnellens der Nadelzungen beim Einschliessen.